

ABSTRACT OF THE DISCLOSURE

The present invention is aimed to provide a valve prosthesis (IV) especially used in case of aortic stenosis, which structure is capable of resisting the powerful recoil force and to stand the forceful balloon inflation performed to deploy the valve and to embed it in the aortic annulus. A valve prosthesis for implantation in a body channel according to the invention comprises a collapsible valvular structure and an expandable frame on which said valvular structure is mounted. The valvular structure is composed of a valvular tissue compatible with the human body and blood, the valvular tissue being sufficiently supple and resistant to allow said valvular structure to be deformed from a closed state to an opened state. Said valvular tissue forms a continuous surface and is provided with guiding means formed or incorporated within, said guiding means creating stiffened zones which induce said valvular structure to follow a patterned movement in its expansion to its opened state and in its turning back to its closed state. The valvular structure can be extended to an internal cover which is fastened to the lower end of the valvular structure to prevent from regurgitation.